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| 10/542,657 | 07/19/2005 | Hiroaki Sudo | L9289.05155 | 8923 |
| 53989 7590 12/08/2009 Dickinson Wright PLLC James E. Ledbetter, Esq. International Square 1875 Eye Street, N.W., Suite 1200 Washington, DC 20006 | | | | |
| EXAMINER DONABED, NINOS J | | | | |
| ART UNIT 2444 | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,657

Applicant(s)

SUDO, HIROAKI

Examiner

NINOS DONABED

Art Unit

2444

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)
Paper No(s)/Mail Date 11/04/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Amendment

1. This communication is in response to Applicants amendment dated 10/19/2009. Claims 9-14 have been amended. Claims 15-22 have been added. Claims 9-22 are pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 9-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding claim 9 and 12, the phrase "the predetermined number of cells being less than a sum of a number of cells of the first mobility anchor point and a number of cells of the second mobility anchor point and including two cells adjacent across the boundary" is vague and unclear because it is not known whether or not the two cells across the boundary are added to the sum of a number of cells or are apart of the sum of a number of cells.
5. Further regarding claims 9 and 12, the phrase "the first care-of address and the second care-of address which, are transmitted through the network, in association with each other" is unclear because it is not known hat the association between the addresses are.

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6. Claims 9 and 12 recite the limitation "the boundary of a first mobility anchor point" in the claims. There is insufficient antecedent basis for this limitation in the claim.
7. Claims 10-11,15-18 and 13-14,19-22 are rejected for being dependent on claims 9 and 12 respectively.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9-10, 12-13 and 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vivaldi ("Fast handover algorithm for hierarchical mobile IPv6 macro-mobility Management") in view of Takahashi (United States Patent Application Publication 20040008664.)

Regarding claim 9,

Vivaldi teaches a communication system comprising:

an access router that communicates with a communication terminal apparatus and transmits a first care-of address and a second care-of address to the communication terminal apparatus; **(See figures 1 and 2 and page 631, left column, Vivaldi teaches an access router which communicates with a mobile node and transmits two care of addresses)**

a mobility anchor point that issues the two care-of addresses of the first care-of address and the second care-of address, **(See figures 2 and 4 and page 631, Vivaldi teaches two COA's)**

a network that connects the mobility anchor point and the access router, and transmits the first care-of address and the second care-of address issued by the mobility anchor point; and **(See figures 1-3 and page 630 bottom of right column and page 631 top of left column, Vivaldi teaches the network which connects MAP to access routers)**

a home agent that registers a home address of the communication terminal apparatus to which the first care-of address and the second care-of address are issued by the mobility anchor point, and **(See figures 2 and 4 and page 631, Vivaldi teaches a home agent that registers a home address of the mobile terminal)**

the first care-of address and the second care-of address which, are transmitted through the network, in association with each other, and transmits data transmitted to the home address of the communication terminal apparatus to a destination indicated by the first care-of address and the second care-of address. **(See figures 2 and 4 and page 631, Vivaldi teaches two COA's and data being transmitted to a destination based on the COA's)**

Vivaldi does not explicitly teach which can be used in, a predetermined number of cells and which cannot be used in cells other than in the predetermined number of cells, to the communication terminal apparatus that communicates with access routers in adjacent cells adjacent across the boundary of a first mobility anchor point and a

second mobility anchor point, the predetermined number of cells being less than a sum of a number of cells of the first mobility anchor point and a number of cells of the second mobility anchor point and including two cells adjacent across the boundary;

Takahashi teaches which can be used in, a predetermined number of cells and which cannot be used in cells other than in the predetermined number of cells, to the communication terminal apparatus that communicates with access routers in adjacent cells adjacent across the boundary of a first mobility anchor point and a second mobility anchor point, **(See paragraphs [0115] - [0126], Takahashi teaches that the Care of address can only be used in its predetermined area.)**

the predetermined number of cells being less than a sum of a number of cells of the first mobility anchor point and a number of cells of the second mobility anchor point and including two cells adjacent across the boundary; **(See paragraphs [0122] - [0128], Takahashi teaches that the predetermined number of cells is less than the boundary of each of the two MAP's)**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have known to combine the teachings of Takahashi with Vivaldi because both deal with mobile nodes and cutting delays in hand-off or handover. The advantage of incorporating which can be used in, a predetermined number of cells and which cannot be used in cells other than in the predetermined number of cells, to the communication terminal apparatus that communicates with access routers in adjacent cells adjacent across the boundary of a first mobility anchor point and a second mobility anchor point of Takahashi into Vivaldi is that provides destination node capable of

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performing efficient path discovery, while quickly responding to change of the path of the mobile node thus making the system more robust and efficient. (See paragraphs [0002] – [0005], Takahashi)

Regarding claim 10,

Vivaldi and Takahashi teach the communication system according to claim 9, wherein the mobility anchor point makes variable at the number of the predetermined number of cells in which the second care-of address can be used. (See paragraphs [00110] – [00115], Takahashi) See motivation to combine claim 9.

Regarding Claim 12,

Claim 12 list all the same elements of claim 9, but in system form rather than method form. Therefore, the supporting rationale of the rejection to claim 9 applies equally as well to claim 12.

Regarding Claim 13,

Claim 13 list all the same elements of claim 10, but in system form rather than method form. Therefore, the supporting rationale of the rejection to claim 10 applies equally as well to claim 13.

Regarding claim 15,

Vivaldi and Takahashi teach the communication system according to claim 9, wherein the predetermined number of cells comprise only the two cells adjacent across the boundary. **(See paragraphs [0146] –[0149], Takahashi)** See motivation to combine for claim 9

Regarding claim 16,

Vivaldi and Takahashi teach the communication system according to claim 9, wherein the mobility anchor point issues the first care-of address which can be used only in a cell of the first mobility anchor point or a cell of the second mobility anchor point. **(See paragraphs [0146] –[0149], Takahashi)** See motivation to combine for claim 9

Regarding claim 17,

Vivaldi and Takahashi teach the Communication system according to claim 9, wherein the mobility anchor point that issues the first care-of address and the second care-of address which are used by the home agent to transmit the data to the mobility anchor point **(See figures 2-4 and page 631, Vivaldi)**, further issues a third care-of address for identifying the communication terminal apparatus in a network of an access router communicating with the mobility anchor point and registers the third care-of address in the mobility anchor point. **(See figures 3-4 and page 632 left column, Vivaldi)**

Regarding claim 18,

Vivaldi and Takahashi teach the communication system according to claim 9, wherein, when the communication terminal apparatus performs communication using the second care-of address in the predetermined number of cells, the mobility anchor point registers the first care-of address in the home agent. **(See figures 2-4 and page 631, Vivaldi)**

Regarding **Claim 19**,

Claim 19 list all the same elements of **claim 15**, but in system form rather than method form. Therefore, the supporting rationale of the rejection to **claim 15** applies equally as well to **claim 19**.

Regarding **Claim 20**,

Claim 20 list all the same elements of **claim 16**, but in system form rather than method form. Therefore, the supporting rationale of the rejection to **claim 16** applies equally as well to **claim 20**.

Regarding **Claim 21**,

Claim 21 list all the same elements of **claim 17**, but in system form rather than method form. Therefore, the supporting rationale of the rejection to **claim 17** applies equally as well to **claim 21**.

Regarding **Claim 22**,

Claim 22 list all the same elements of **claim 18**, but in system form rather than method form. Therefore, the supporting rationale of the rejection to **claim 18** applies equally as well to **claim 22**.

10. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vivaldi ("Fast handover algorithm for hierarchical mobile IPv6 macro-mobility Management") in view of Takahashi (United States Patent Application Publication 20040008664) further in view of Chubbs III (United States Patent Number 6400304)

Regarding **Claim 11**,

Vivaldi and Takahashi teach the communication system according to claim 10, wherein the mobility anchor point detects the moving speed of the communication terminal apparatus, and when communicating with the communication terminal apparatus moving at high speed, makes the number of the predetermined number of cells larger than in a case of communicating with the communication terminal apparatus moving at low speed. **(See paragraphs [0146] –[0151], Takahashi)**

Chubbs, III. teaches an integrated GPS system which can detect the speed of a car. **(See Abstract and Column 1 Line 60 – Column 2 Line 26, Chubbs III .)**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have known to combine Venkitaraman, Vivaldi and Valko with Chubbs, III because GPS systems commonly detect speed of vehicles and mobile

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nodes are commonly used in vehicles, thus a combination of the inventions would provide for a mobility anchor point system which could detect the speed of a mobile node.

The mobility anchor point after knowing the speed of the mobile node using the GPS system could have issued another care-of-address to a larger group of cells after detecting the speed of the mobile network because this would help increase the efficiency of the connection during handoff of the mobile device, and ultimately protect the integrity of the mobile connection.

Regarding **Claim 14**,

Claim 14 list all the same elements of **claim 11**, but in system form rather than method form. Therefore, the supporting rationale of the rejection to **claim 11** applies equally as well to **claim 14**.

Response to Arguments

11. Applicant's arguments with respect to claims 9-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any response to this Office Action should be **faxed** to (571) 272-8300 or **mailed** to:

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Hand-delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NINOS DONABED whose telephone number is (571)270-3526. The examiner can normally be reached on Monday-Friday, 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. D./

Examiner, Art Unit 2444

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444